

Industrial

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Safety is part of
Job Instruction

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Editor Norval Burch

Art Layout..... Bill Wendland

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Homo Sapiens

SOME lad once cracked that "Homo sapiens" meant "Any guy can make a fool of himself." Granted, but in this safety business we have to go from there. We have to worry about men and women who make an art of making fools of themselves.

I'm right now reading a book on psychosomatic medicine, and the darn thing has me so confused I have to rush into print about it.

The general idea seems to be that people often bottle up their personal troubles so that a time comes when something has to give. When it does, the result may be heart disease, diabetes—or accidents.

Now don't back away from that idea. Profit by it. You may find in it the explanation of some of your chronic bunglers, of the people who break all the rules of common sense and cause and effect in order to foul things up. Watch for them. They're the ones who need extra guidance and your wisest counsel.

Do you suppose the day is coming when we will send our folks to the psychiatrist *before* they get hurt, rather than to the surgeon *after* they do?



*The
Armchair
Expert*



OF COURSE, nearly everyone could use a little extra cash—even these newlyweds. How about you?

There's an extra Ten Dollars waiting for you—if you'll write the best finishing line for the incomplete safety limerick below. It's as easy as that.

If your entry should rate among the 15 next best lines, in the opinion of the judges, you will get a \$1 prize.

Now, try your hand on this:

**No, the big machine never hurt Jess—
He used guards and skilled care at the press.
But, believe it or not,
Ol' Jess simply forgot**

.....

Don't use this page, but write your finishing line on a fresh sheet of paper, giving your name and address, firm name and position. Mail your entry before midnight June 30 to the INDUSTRIAL SUPERVISOR, National Safety Council, 425 North Michigan Avenue, Chicago 11, Ill. Decision of the judges will be final and all entries become the property of the National Safety Council.

5 minute safety talk

Subject No. 18

Slips and Falls

Each of us has his ups and downs, but the supervisor whose departmental safety record is marred by too many slips and falls has more than his share. There's something wrong, and it's his job to find the trouble and correct it before he falls clear out of a job.

Whatever the cause may be, it's certain he will need the wholehearted cooperation of his crew in improving the record. The following talk might help him explain the situation and keep them on the alert:

LIFE is full of slips, falls and mishaps, and many times the bystander gets a laugh out of someone else's apparent awkwardness. But when an unfortunate individual fails to get up, our laughter changes to concern.

Slips and falls are the top problem for anyone concerned with safety. These accidents head the list in industry, and in homes, too. They're responsible for many hours and days of lost time and often result in fatalities or permanent disabilities.

The best way to make a place safe to work is to make sure that housekeeping is good, with a place for everything and everything in its place.

Our feet seem to get us into the most trouble, and I don't mean by taking us where we shouldn't go. How often have you tripped on a slightly uneven spot in an ordinary sidewalk and looked around to see a variation of a quarter of an inch in the surface?

All holes, cracks, and other imperfections in floors should be remedied whenever possible, especially those around machines, because that's where you spend most of your time. It's up to you to keep the floor area around your machine clean, free from oil spillage and debris. Also, remember that tools or other objects placed on the floor can easily cause a fall.

How else can floors cause slips and falls?

Well, the surface, regardless of whether it's con-



Drawings by Mally.



crete, wood, metal, linoleum, wood block, black top, or any other material, can deteriorate.

Of course, keeping these surfaces in shape is a maintenance problem, but it's the job of each of us to report defects.

Water, grease, and oil should be cleaned up immediately. Either use an antislip preparation, or give the area a good scrubbing.

Scrap and waste material should not be allowed to clutter the floors.

Aisles are marked so we'll have definite avenues of travel. We have to keep these aisles clear of all material, parts, and so on, to reduce the underfoot hazard.

Often one of the major causes of falls is our footwear. Shoes in poor repair or shoes not meant to be worn for work cause fatigue, and fatigue is an accident-maker.

We all know there are shoes especially designed for various types of work, and we all know it's a good idea to wear safety shoes to protect our toes from falling objects.

Stairways should be kept free from foreign matter, and nothing should be stored on them. Report treads that need repair, and be sure to use the hand rails.

A few precautions will prevent falls from ladders. For your protection, all new ladders are carefully inspected for defects when they're brought into the plant, and are equipped with ladder shoes which will firmly grip any base surface.

Every ladder is equipped with a piece of $\frac{3}{4}$ -inch Manila rope, approximately 4 feet long. Be sure this rope is attached to one of the rungs at all times, and when you set a ladder tie the top so that the ladder will stay in safe position. This rope is an extra safeguard in case a power truck or other vehicle should strike the base.

If the job is such that you can't tie the ladder, ask another man to help support and guard the base of the ladder.

Last but not least, I know that you men have been in industry long enough to realize the dangers of horseplay and to know that it can cause serious falls. Let's have none of it in this plant.

If we are all safety-minded and on the alert to report hazards, we'll be able to eliminate most slips and falls. If you have suggestions for improvements, let's have them.

One last word: Try to set a good example. Safety is contagious.



"Slips and Falls" was prepared for the NSC series of 5-Minute Safety Talks for Foremen by R. Brandon Marshall, Denver Chapter, National Safety Council.

COGS IN THE WHEEL

EVERY time there is a serious accident, investigation of events leading up to the mishap discloses that, however carefully the operation may have been planned, at least one unsafe act may be listed as the cause.

The more hazardous the job, whether it's in industry, in the home or elsewhere, the more carefully the work must be planned. Supervisors must foresee every contingency, and their job safety instructions must include every minute detail if they are to be certain of avoiding mishap. Every single link in the chain, every little cog in the wheel, must be there when needed.

One good way to study the effectiveness of a safety program is to review the near-accidents. Here, without the distractions and the distress caused by a real injury, it is possible to weigh the facts calmly and determine just wherein the program is faulty, to find just what practices must be changed.

Such an incident aboard a seagoing oil tanker of the Standard Oil Company of California, as reported in their Marine Department's Safety Bulletin, illustrates the point that in accident prevention every cog in the wheel of safety has its place in hazardous operations.

The ship, according to the report, was returning from a voyage with several cargo compartments empty, so it was decided to remove rust accumulations in these tanks. Tops were opened and the compartments were ventilated.

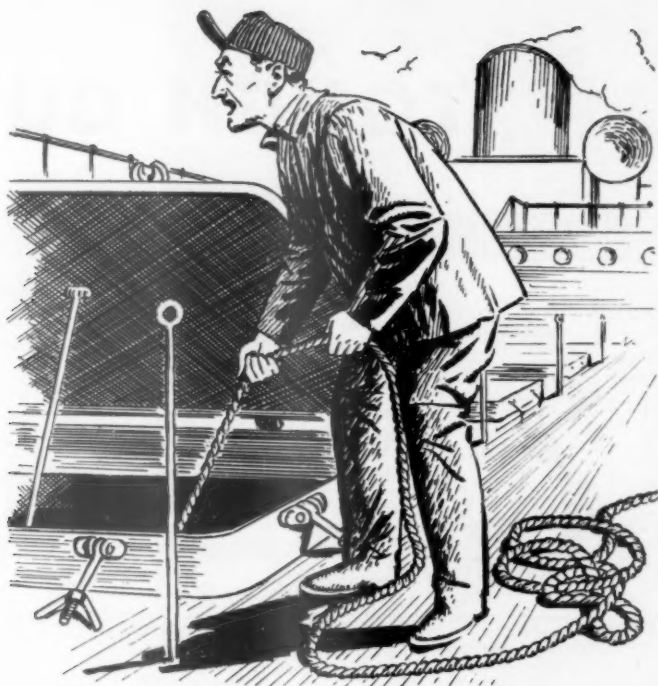
Next morning the chief mate

checked each compartment with a combustible gas indicator and, finding a concentration of less than 0.1, pronounced them "safe for men." Rust removal operations were carried out during the morning in tanks No. 1 and No. 2 wings without incident. After the noon meal part of the crew started work on No. 2 center, while three men were detailed to start operations in No. 6 starboard. Two of the men entered the tank with scoops, whisk brooms and buckets, while the third man was stationed on deck to hoist the buckets and keep watch on the men below.

After four or five buckets of rust had been removed in the first 20 minutes of operation, the watcher on deck noticed the men in the tank were moving sluggishly and drunkenly. Getting no coherent reply when he called to them, the watcher ran forward to tell the bosun that the men were being overcome by gas, then returned to his post.

Sending one man to inform the master and the chief mate, the bosun called the rest of the crew to assist him in rigging fresh air apparatus at No. 6 starboard compartment. One sailor donned a supplied-air respirator and entered the tank, helping one of the men to climb to the deck. Returning below, he found the second man unable to walk, so he passed a lifeline around his chest and the crew above hoisted him to the deck.

The two men were semi-conscious but incoherent in their speech. They were made to lie prone on the deck



about 15 minutes, until they became rational, then were put to bed a few hours. Both had recovered completely by supper time, and neither suffered any noticeable after-effects.

It was concluded that the peeling off of the rust scale had released pockets of gas vapors that contaminated the tank atmosphere.

The report of the ship safety committee added the comment:

"We feel this incident illustrates how a dangerous situation may develop in spite of all reasonable precautions; further, it illustrates how the situation can be prevented from

becoming disastrous by the coordinated action of officers and crew and proper use of safety gear."

Comment of the company's Shore Safety Committee pointed up the lessons of the incident in this manner:

"Let us compliment this vessel for the manner in which the emergency was handled. Here are the things that were well done:

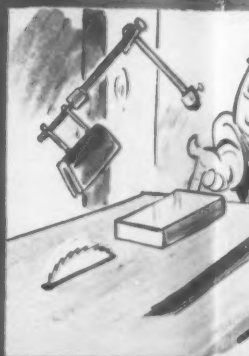
"First, a man was kept on deck, watching over the men in the tank, in accordance with our tank cleaning regulations.

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TOUGH GUY



*Quite so strong as me as was big gun in war days
And so fast he could beat the press men on his stamp*



*The big goal was also when
Said "I'm tough, can't be hurt"*



*"Just suppose," he warned him, "one of those little guys
"Shoot your arrow, he'd end up in a million little ones"*



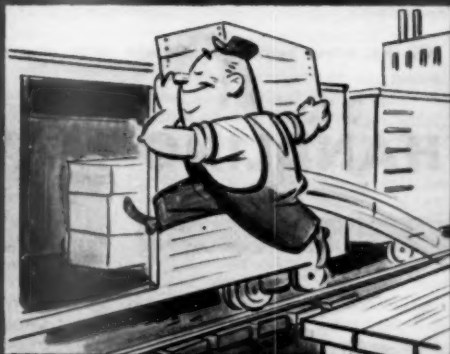
*"What your gift you should end at
"Shoot this one how to get" first"*

STIFF CHARACTERS come in several types and sizes, as any insurance broker will tell you. There is the tough guy, for instance, who can give the cold test to the supervisor's ability to handle workers.

The tough guy may be your drinking chum, because he thinks he's too tough, too strong and too agile to get hurt as he takes foolish chances—and his last mistake is not getting to the year safety counting program at all. Will he refer to his need for feeling important by giving him responsibility, or this forgotten did?



When reminded of guards, he hurt, it is not in the cards."



Personalized and up to date—this is a good way to make the business's message was a good deal stronger.



and as the crew's safety guide, he is recalled as a good guide.



Then the bottom of the matter, that's all. The bottom of the matter, that's all. The bottom of the matter, that's all.



Oil ship leaves Venezuela dock with cargo after loading without mishap.

HANDLING MATERIALS

By T. J. Ostrewich

*Safety Director, Mene Grande Oil Co.
Barcelona, Venezuela, S. A.*

NOBODY likes to hear old, familiar rules repeated over and over again—but the handling of materials is such a prolific source of injury in nearly every type of industrial operation that we should review the applicable safety measures again and again.

Since materials-handling injuries bear a direct relationship to the amount of exposure, it is obvious that any reduction in the number of contacts will also reduce the accident total, as well as labor costs. Therefore, we should apply our knowledge of mechanical handling applications in every possible operation. Not only will we save our workers from unnecessary exposure to injury, but we will release them for other work, thereby cutting costs and contributing to the effi-

ciency of the entire operation.

To achieve this degree of efficiency and safety, supervisors should study every materials handling job, giving special attention to the tonnages involved, character of articles or materials, the necessary steps in unloading from ship, car or truck and storage, preparing for shipment and shipping, and all the

Pipe is loaded and unloaded by mechanical means with minimum exposure.



intermediate steps in handling.

Consideration must also be given to the handling of incidental supplies and equipment, for, at times, these incidental jobs are not given proper consideration and may lead to trouble.

Many authorities on the subject agree that the following steps are necessary in the safe and efficient handling of materials:

- a—Plan and arrange operations and methods to eliminate hazardous situations and insure adequate control at all times.
- b—Substitute mechanical methods for manual handling to the maximum practical degree.
- c—Train carefully and assign personnel according to known capabilities.
- d—Provide all necessary protective equipment.
- e—Give close attention to maintenance and housekeeping.

It is the poorly planned or poorly controlled operation that yields the highest injury rate and the most excessive costs, therefore planning heads the list. A close second is the full use of mechanical methods in every possible way.

Competent supervision is of the highest importance in any extensive materials handling operation. Many executives do not realize how much

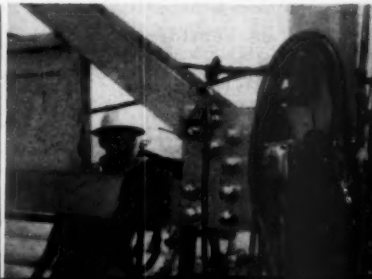
a good foreman can accomplish in such operations, in promoting the best employer-employee relationships and in conducting operations with a minimum of accidents. If the foreman knows his job and knows how to handle men, the workers will respect his judgment and will carry out orders willingly. His example in following safe methods, in using prescribed safety equipment and in avoiding needless exposure of his crew to injury will go far toward the elimination of accidents.

Personal protective equipment must be prescribed according to the nature of each job. As a rule, safety shoes, gloves and safety goggles lead the list in materials handling jobs, but some operations call for respirators or gas masks, or for various types of protective clothing. It is the duty of the foreman to follow through after prescribing the needed equipment, and see that every worker obeys the order.

Maintenance is important in every industrial operation, but especially so where materials handling equipment is concerned. Serious accidents often are caused by such trivial things as wobbly truck wheels, rickety truck bodies, worn and uneven floors, stretched and worn chains and hooks and crane cables, broken tools, faulty power equipment and the like.

Tractors and lift trucks must be properly maintained for efficient handling.

Grounding clamp and cable on loading dock to ground tankers before flowing oil.



Supervisor misses opportunity if new man is not taught safe practices, provided with goggles and other safety equipment.

By R. H. Albisser
*Safety Manager
Merck & Co.
Rahway, N. J.*



INTEGRATED SAFETY

UNFORTUNATELY, some supervisors lose sight of the fact that safety is also for them.

They think safety is the safety engineer's job or the manager's headache, while their job is production.

Although a supervisor is not primarily interested in accident prevention, he needs safety if he is to carry out his prime responsibilities. If we consider what is expected of supervisors and how they spend most of their time, it becomes apparent that safety and supervision go hand in hand.

Let's consider the supervisor's prime responsibility, that of maintaining production. Can he effectively continue to maintain maxi-

mum production without safety? No, he cannot, because accidents cause work stoppages. Whether or not personal injuries are involved, accidents interfere with production. Therefore, if Mr. Supervisor is going to carry out his prime responsibility, he must do whatever he can to promote measures which will keep accidents at a minimum.

The supervisor's second responsibility is costs. He may be under the impression that, since compensation and medical expenses are usually overhead items, he may have very little to worry about in this direction. However, the direct costs of accidental injuries are relatively insignificant as compared to the indirect expenses which are not charged to overhead. On the average, so-called indirect costs of accidents are generally considered to be four times those for compensation and

Condensed from an address before the Greater New York Safety Conference.



This worker is protected as acid line is opened—but worker in lower, right corner should be warned of possible hazard.

medical. It is clear then that the supervisor cannot run his department efficiently without paying close attention to safety.

The third responsibility of the supervisor is to keep the morale of employees at a high level. What surer way is there for a supervisor to lose the good will of his workers than by failing to show any regard for their safety? Therefore, safety again plays a major role in assisting the supervisor to carry out another of his major responsibilities.

Is safety a factor in the supervisor's job of carrying out company policies or directives? Any progressive employer knows that safety is essential to the efficient operation of any industrial enterprise, and therefore it is good business. Why should a supervisor differentiate between orders from his superior pertaining to safety and those dealing with quality, quantity, or any other aspect of the operation? If the supervisor does not see that the plant's safety regulations are being complied with, he is not effectively carrying out another one of his responsibilities.

The supervisor may not be interested primarily in accident prevention; but unless he gives safety a lot of attention, he just is not a good supervisor. Safety needs supervision, but the supervisor also needs safety to assist him in efficiently carrying out every one of his major responsibilities.

If safety is so important to supervision, what are some of the principal things a supervisor must do to promote accident prevention?

Ordinarily in issuing orders, the supervisor not only tells the worker what he wants done but also how the job is to be performed. Is it not logical then, that if the supervisor reminds the worker of the precautions to be observed at the same time he issues his operating instructions, there is less chance of accident? Even if the worker may not be entirely sold on the need for observing all precautions, he is more likely to do the job safely if his supervisor has just instructed him in the safety measures which he is to observe.

Systematic methods have been developed.
(Turn to next page)

INTEGRATED SAFETY

(From preceding page)

veloped for supervisors to follow in analyzing every job for safety. These are good and have proven worthwhile, but the important thing for the supervisor to remember is not to differentiate between operating and safety instructions when issuing orders.

Many supervisors make the mistake of giving complete job instructions and then adding the safety measures as an afterthought. Of course, this is better than no safety instructions at all, but they lose much of their effectiveness when they are looked upon as an afterthought.

Some supervisors often fail miserably in enforcing their safety instructions. For reasons which are not quite clear, they usually "blow up" when a worker fails to carry out instructions affecting quality and quantity but often disregard infractions of safety rules.

Next time you hear a supervisor complain, "I cannot get Joe to wear his goggles when he is handling acid," ask him what he would do if Joe, contrary to instructions, would insist on charging twice as much acid into the batch as he was instructed and ruined the product.

If the supervisor has the ability to convince his workers that his operating instructions must be followed to insure a satisfactory product, then he should be able to sell his men on taking precautions which will save them from personal injury.

In training his workers, especially a new employee, the supervisor has

another excellent opportunity to promote safety. The new man should be impressed with the importance of safety; and the supervisor should clearly point out the principal hazards, the precautions that must be observed, and see that he has the necessary personal protective equipment, such as goggles, to adequately protect himself. It is easier to start the new man off right than to change the long established habits of the older workers.

The supervisor should also consider the safety aspects of every job when planning new work. If he just asks himself what are the area, material, or equipment hazards which might be encountered on the new job, the chances are that the principal hazards will become apparent. He should consider such things as: Are the materials involved flammable, poisonous, hot, sharp, etc.? What are the inherent dangers in connection with the tools and equipment which will be used?

After he has spotted the potential dangers, he should take steps to eliminate as many as possible and make sure the workers know how to safeguard themselves against the remaining dangers.

Only a few of the things a supervisor does have been discussed, but notice how safety fits into the supervisor's job. There are other things a supervisor may do to promote safety; but in these, his main functions, he must integrate safety if he is to do an effective job.

Good supervision is not only essential to accident prevention, but the supervisor who does not pay close attention to safety cannot do an effective job.

Efficient production and safety go hand in hand.

COGS in the WHEEL

(From page 7)

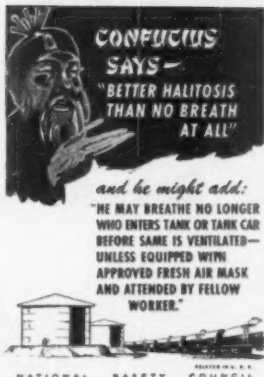
"Second, the man on deck gave the alarm and got help. Splendid. Too often the watchers have gone to the aid of their companions without getting help and have been overcome themselves.

"Third, the bosun called the master and the mate and rigged fresh air breathing apparatus. Good.

"Fourth, the rescued men were made to lie down on deck. Excellent. Men who have been overcome by petroleum vapors and revived should not be allowed to walk around; they may strain their hearts.

"Lastly, this incident illustrates that a 'gas-free' test is good only for the moment it is taken.

"Question to Ship Safety Committees: Should our regulations be changed to require frequent testing



with a combustible gas indicator while men are in the tanks, or are the present regulations adequate?"

Cogs in the wheel of safety—and each and every one important in the saving of lives.

LIMERICK WINNERS

First prize of \$10 in the April safety limerick contest was awarded to Harry M. Rowe, asst. labor relations advisor, Solvay Process Div., Allied Chemical & Dye Corp., Syracuse, N. Y., for this finishing line:

The plant's biggest joker was Joe
'Til a backfiring trick laid him low.

Now it isn't so funny —
It's his pain and his money

And his scar that is going to show.

Winners of the 15 \$1 runner-up prizes were: Isabelle Ramsdell, sten., Scintilla Magneto Div., Bendix Aviation Corp., Sidney, N. Y.; Glenn C. Arnold, engineer, Chicago District Electric Generating Corp., Hammond, Ind.; Marjorie Sexton, secretary, Guide Lamp Div., General Motors Corp., Anderson, Ind.; Mrs. Rita M. Malinski, appointment clerk, U. S. Coast Guard, Curtis Bay, Md.; William H. Sidner, asst. purchasing agent, Carbide & Carbon Chemicals Corp., Oak Ridge, Tenn.; Kay Linehan, secretary, Public Service Co. of New Hampshire, Manchester, N. H.; Thelma M. Carbaugh, secretary, Potomac Edison Co., Hagerstown, Md.; George Hoffman, asst. ground safety officer, Travis Air Force Base, Fairfield, Calif.; Jacob Myers, janitor, Congoleum-Nairn, Inc., Cedarhurst, Md.; Cordia E. Phillips, chief en-

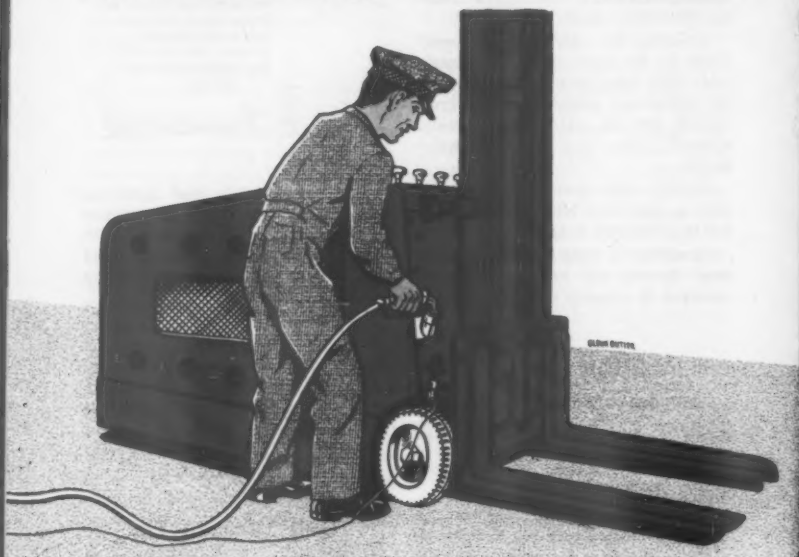
gineer, Service Pipeline Co., Natoma, Kan.; Comdr. R. F. Armknecht, public works officer, Naval Air Station, Quonset Point, R. I.; W. C. Niddings, master mechanic, International Smelting & Refining Co., Perth Amboy, N. J.; Karl Luseneburg, night foreman, Brown & Bigelow, St. Paul, Minn.; Edward Braun, production control clerk, Crossley Div., Avco Mfg. Corp., Cincinnati, Ohio, and R. J. McQuilkin, manager quality control dept., A. B. Dick Co., Niles, Ill.

Tank Wagon Tip

Even water wagons have their fire hazards. From Pennsylvania comes the report of a city street employee driving peacefully along with his water truck squirting a fine spray to settle the dust, when his truck caught fire. If it had been built like an elephant, the truck could have squirted itself with its two-ton cargo of water, but the driver wisely decided to call the fire department—in a hurry.

HOW to do it

90. Refueling Motor Vehicles



Shut off engine before refueling. Attach grounding cable (arrow) by clamp to metal frame of truck or make certain metal nozzle of filler hose makes good contact with metal of fill pipe to avoid dangerous static accumulation. Make sure fuel hose does not leak.

Watch progress closely to avoid

overfilling. If gasoline is spilled, flush it away or wipe off of engine and allow time for vapors to evaporate before restarting. Drain and hang hose securely; replace cap tightly on tank.

When refueling away from approved location, get permission and use approved type of safety can with self-closing lid.